

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-3, 7-27, and 31-48 are pending in the application, with claims 1, 23, 24, 25, 47, and 48 being the independent claims. Claims 4-6 and 28-30 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding objections and rejections.

Objection to the Specification

On page 9 of the Office Action, the Examiner objected to the specification for various informalities, namely, the use of lower-case designations for drawing figures, whereas upper-case designations were used in the drawings. As suggested by the Examiner, the specification has been amended throughout to capitalize references to drawing figures. Reconsideration and withdrawal of the objection is requested.

On page 9 of the Office Action, the Examiner objected to claims 1-3, 7-21, and 31-45 for various informalities, namely, the use of periods. Claims 1-3, 7-21, and 31-45 have been amended to remove the periods. Reconsideration and withdrawal of the objection is requested.

Rejections under 35 U.S.C. § 101

On page 2 of the Office Action, the Examiner rejected 1-3, 7-27, and 31-48 under 35 U.S.C. 101, as being directed to non-statutory subject matter. According to the Examiner, "the manipulation of a virtual library with compound selection is non-

statutory subject matter as not being physical or tangible process, but rather an algorithm or manipulation of abstract material.

Independent claims 1, 23, 24, 25, 47, and 48 have been amended to recite outputting a list generated by a computer, thus reciting a tangible feature of the invention. Reconsideration and withdrawal of the objection is requested.

Rejections under 35 U.S.C. § 112

On page 2 of the Office Action, the Examiner rejected claims 1-3, 7-27, and 31-48 under 35 U.S.C. section 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The Examiner notes several issues of concern.

Independent claims 1, 23, 24, 25, 47, and 48 have been amended to address and overcome the concerns raised by the Examiner. For example, in claim 1, "deconvoluting said ... compounds into reagents" has been changed to, "deconvoluting said .. compounds into associated building blocks." In the preamble of claim 1, the phrase, "method of selecting one or more compounds from a ... library" has been changed to, "method of analyzing a virtual library." The preamble of claim 1 has also been changed to recite that the method is a "computer implemented" method. Similar changes have been made to independent claims 23, 24, 25, 47, and 48, and to their dependent claims. Applicants believe that these changes address the Examiner's concerns. Reconsideration and withdrawal of the rejection is requested.

Rejections under 35 U.S.C. § 102

On page 5 of the Office Action, the Examiner rejected claims 1-3, 7-27, and 31-48 under 35 U.S.C. 102(a), as being anticipated by Lobanov et al., J. Chem. Inf. Comput. Sci. 40:460(2000). The cited reference is a publication of the work of the inventors of the present invention, and is therefore not "by another" as required by 35

U.S.C. 102(a). A supporting Declaration under 1.132 is filed herewith.

Reconsideration and withdrawal of the rejection is requested.

On page 5 of the Office Action, the Examiner rejected claims 25-27, 31-37, 47, and 48 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 4,811,217 issued to Tokizane et al. (hereinafter "Tokizane"). Applicants respectfully traverse.

On page 6 of the Office Action, the Examiner states that "this set of M compounds is then deconvoluted into component reagent parts as summarized as the elements 1-8 in TABLE 1 in columns 5-6 as in step c. of instant claim 25." Even if this is an accurate description of Tokizane, which Applicants do not concede, Tokizane does not teach or suggest, alone or in combination with any of the other applied references, generation of a focused library from the reagents in Table 1, as recited in independent claims 25, 47, and 48. Instead, Tokizane appears to teach the use the attribute data of Table 1 to search a database for compounds having similar attributes. Claims 26, 27, and 31-37 depend from claim 25 and are thus patentable for at least the reasons provided above with respect to claim 25. Reconsideration and withdrawal of the rejection is requested.

On page 6 of the Office Action, the Examiner rejected claims 1-3, 7-23, 25-27, and 31-47, under 35 U.S.C. 102(e), as being anticipated by U.S. Patent 5,789,160 issued to Eaton *et al.* (hereinafter "Eaton"). According to the Examiner, "this rejection utilizes the disclosures of Eaton et al. which are available due to the above noted unclarity as to whether the actual claim steps may or may not be performed within a computer system due to unclarity of claim wording as noted above."

As discussed above with respect to the rejection under 35 U.S.C. § 112, second paragraph, independent claims 1, 23, 25, and 47 have been amended to recite that the invention is implemented in a computer. For at least this reason, Eaton et al. neither teaches nor suggests, alone or in combination with any of the other applied references, the invention as recited in claims 1, 23, 25, and 47 as amended. Claims 7-23 depend from claim 1, claims 26, 27 and 31-46 depend from claim 25, and are thus patentable for at least the reasons provided above with respect to claims 1 and 25. Reconsideration and withdrawal of the rejection is requested.

On page 8 of the Office Action, the Examiner rejected claims 1-3, 7-27, and 31-48 under 35 U.S.C. 102(b) as being anticipated by European Patent Application number EP 0,818,744, issued to Young *et al.* (hereinafter "Young"). Applicants respectfully traverse.

Young does not teach or suggest, among other features, selection of a set of enumerated compounds, deconvolution of the selected set of enumerated compounds into their associated building blocks, and generation or extraction of a focused library of virtual compounds based on the associated building blocks, as recited in amended independent claims 1, 23, 24, 25, 47, and 48. For example, step (7) of Young (page 1, column 2), states,

"optionally, selecting from said third virtual library at least one further molecular fragment and repeating steps (4), (5) and (6) to generate an alternative third virtual library."

Step (4) of Young (page 1, column 1) simply states,

"generating a set of lists of accessible reagent compounds... the lists being such that a combination of compounds taken from each list ... may be reacted to produce a candidate compound comprising said molecular fragment carrying a plurality of substituent groups...."

Neither step (4), nor any other part of Young teaches or suggests to deconvolute the "at least one further molecular fragment" into associated building blocks and to generate a subsequent virtual library "based on the associated building blocks" as recited in the pending claims. Young does not even teach or suggest that the reagents selected in the second iteration of step (4) are related to the reagents that were used in the first iteration of step (4). For at least these reasons, Young neither teaches nor suggests amended independent claims 1, 23, 24, 25, 47, or 48. Claims 2-3, 7-22 depend from claim 1, and claims 26, 27, and 31-46 depend from claim 25, and are thus patentable for at least the reasons provided above with respect to claims 1 and 25. Reconsideration and withdrawal of the rejection is requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding objections and rejections.

Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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Date: 3/25/03

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